

CITY OF GUNNISON

ACTION ENERGY PLAN



June 9, 2009

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*Compiled by a Working Group of City Staff, City Council Members and Citizen Volunteers
Assembled after Upper Gunnison Valley Energy Summit in September, 2008:*

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THE CITY OF GUNNISON is a community of 5,000-plus located in a floodplain at the hub of several mountain valleys in the Upper Gunnison River basin. At this point in time, the people of the City are almost totally dependent on outside entities for its energy resources, which constitute a huge drain on the local economy; in addition most of those energy resources are fossil fuels which will be increasing further in price as finite reserves decline in the near future. These fossil fuels also contribute greenhouse gases to the atmosphere that the majority of scientists now say is contributing to warming and drying globally that is predicted to also stress the local economy. This Energy Action Plan is an effort to positively address these significant concerns over the course of the next two generations.

THIS PLAN consists of Objectives and Action Steps that will be carried by the City of Gunnison and or The Committee. Implementation of the Action Steps will fall to the City Staff as well as the committee, both to carry out existing energy-saving programs and participate in some new ones; all of them will require consideration and action by the City Council, and or the City Planning and Zoning Commission. . “City” in this document refers to the City government – Council, Staff, other City commissions – and its roles within the larger community.

MISSION: The City of Gunnison will work with other groups within the City and with other jurisdictions of the Upper Gunnison River Valley to develop strategies designed to significantly reduce our fossil-fuel energy consumption and consequent greenhouse gas emissions, in ways that a) further building a stronger local economy and b) maintain the environment and its resources for our children and others who come after us in this beautiful place.

GOALS: To carry out that mission, we will develop strategies designed to meet these two goals:

- Reduce the City’s 2005 levels of greenhouse gas emissions within the City of Gunnison by 20 percent by 2020, with the City government showing initiative and leadership in improving the energy efficiency of its own structures and systems.
- Reduce the City’s 2005 levels of greenhouse gas emissions within the City of Gunnison by 2050 to levels consistent with state priorities, with the City government showing initiative and leadership in improving the energy efficiency of its own structures and systems.

GUIDING PRINCIPLES for this Energy Action Plan:

- Implementation of any action step will be accompanied with or preceded by appropriate educational efforts so that, first, citizens will understand the need for the things they will be asked to do; and second, will be enabled to invest energy savings positively in a more renewable and locally-reliant future.
- The city will develop energy actions that are fiscally responsible within the context of the City budget, and that strive to employ local labor and resources in ways that improve the local economy and local government revenues.
- The City will emphasize voluntary energy efficiency actions that are affordable for all income ranges, offer relatively quick return on investments, and keep energy money and jobs in the valley.
- Where common challenges or opportunities are evident, in areas like transportation and waste, the City will coordinate the City’s energy action planning process with other energy action plans being developed in the valley.

RECOMMENDATIONS FOR OBJECTIVES AND ACTION STEPS: These Objectives and Action Steps are primarily oriented toward achieving the “2020 Goal” of 20% GHG emissions reduction, consistent with the Colorado Climate Action Plan, and are outlined in 9 categories:

- A. Organizational Energy Action Objectives (p. 2)
- B. Public Education Objectives (p. 3)
- C. Efficiency and Conservation Objectives for Existing Buildings (p. 4)
- D. New Construction and Development Objectives (p. 6)
- E. Transportation Objectives (p. 7)
- F. Landfill Waste Reduction Objectives (p. 8)
- G. Power Objectives (p. 8)
- H. Longer-term “2050” Objectives to be addressed by 2020 (p.9)
- I. Financing Options (p. 10)

A. ORGANIZATIONAL OBJECTIVES FOR THE CITY PLAN

OBJECTIVE 1: The overall objective of this more specific Energy Action Plan is to delineate the Objectives and Action Steps for the community Plan that will fall to the City Staff, City Council and/or Planning and Zoning Commission and the Committee.

OBJECTIVE 2: The City will strive to work in a coordinated fashion with the citizen volunteer Gunnison Energy Action Working Group and with the governments and volunteer groups of other valley jurisdictions to accomplish the energy and climate goals in this plan.

OBJECTIVE 3: The City Council encourages semiannual reports on Energy Action Plan progress from City Staff and the citizen volunteer Gunnison Energy Action Working Group.



B-1. PUBLIC EDUCATION OBJECTIVES/City Responsibilities

OBJECTIVE 1: The City will offer to work with school officials to develop an Energy Action Plan for the RE1-J School District, for all the schools located within the City or within the City electric service territory, in such a way that it can be an educational resource for students.

OBJECTIVE 2: The City Staff will collaborate with the valley-wide Public Information Committee to develop community education programs to implement energy & environmental Information and activities in the community.

ACTION STEP 2.1: The City will strive through public education to increase community participation in its existing energy efficiency and renewable energy programs, specifically –

CITY WIND ENERGY PROGRAM: Increase promotion of the City/MEAN program for purchasing wind energy.

HOME ENERGY EFFICIENCY AND CONSERVATION: Advertise and continue to provide energy audits at no additional cost to city residents, businesses, and government buildings.

ONE CFL IN EVERY HOUSE: Advertise and continue to promote this and other small electric-savings steps.

ACTION STEP 2.2: The City Staff will explore the possible use of the city web site for:

- advice and suggestions on energy use
- interactive space for citizens to tell what they are doing
- regular *local* ride information for commuters, to cut use on roads and encourage car-pooling to supplement bus.
- Posting bus schedules

ACTION STEP 2.3: The City will consider the distribution of energy-Information and energy-action flyers and informational materials.

ACTION STEP 2.4: The City Staff will explore the expansion of the city recycle program to include bins at gas stations as well as around town, to remind people to recycle.

B-2. PUBLIC EDUCATION OBJECTIVES/Committee Responsibilities

OBJECTIVE 1: The valley-wide Education in Schools Committee will work with school and government officials to develop an Energy Action Plan for the RE1-J School District, for all the schools including those in the City.

ACTION STEP 1.1: The Committee will obtain from City Staff and from the City's energy supplier's information about relevant opportunities, rules, guidelines, et cetera pertaining to local energy use and efficiency.

ACTION STEP 1.2: The Committee will work with the Education Program faculty at Western State College on the possible development of in-service or summer programs addressing the challenge of changing the ways American society thinks about energy, for current teachers (recertification credits) and future teachers.

OBJECTIVE 2: The valley-wide Public Information Committee will develop community education programs to implement energy & environmental Information and activities in the community.

ACTION STEP 2.1: The Committee will create and/or coordinate with City Staff educational programs in the City including promotional materials and workshops for programs such as:

LOCAL FOOD PRODUCTION: Provide information and or assist in coordinating expert presentations covering a range of topics from composting to best food plants for the Upper Gunnison valley.

SUSTAINABLE LIVING: Explore the possibility of coordinating a general class or provide information in "aware home making and community living" that covers energy efficiency, food production, waste Information, and other qualities of 21st century living.

CONTRACTOR/REALTOR/DEVELOPER COURSES: Develop opportunities for key private-sector groups to become informed on incorporating energy efficiency and renewable energy into their plans and projects.

ACTION STEP 2.2: The Committee will work with City Staff on the possible use of the city web site for:

- advice and suggestions on energy use
- interactive space for citizens to tell what they are doing
- regular *local* ride information for commuters, to cut use on roads and encourage car-pooling to supplement bus.
- bus schedule

ACTION STEP 2.3: The Committee will help publicize the City's on-going "One CFL in Every House" program, the wind energy credit program, and other existing or planned programs to reduce or replace fossil-fuel energy use.

ACTION STEP 2.4: The Committee will develop a travel-ready booth or other form of presentation to use at public events, encouraging energy Information and providing do-it-yourself energy efficiency checklists and problem correction information.

ACTION STEP 2.5: The Committee will develop a do-it-yourself home energy efficiency checklist for distribution to City residents.

ACTION STEP 2.6: The Committee will coordinate with City staff for distribution of energy-Information and energy-action flyers and informational materials.

ACTION STEP 2.7: The Committee will develop and expand relationships with local media to -

- get stories about people doing energy projects in the paper
- put PSAs on KBUT & other radio stations with energy tips
- put PSAs on radio stations from public officials & kids thanking people for trying
- get energy & environment Information columns & news in media

ACTION STEP 2.8: The Committee will explore the idea of a "Community Challenge" program whereby groups challenge others in energy consumption reductions.



C-1. EFFICIENCY AND CONSERVATION OBJECTIVES FOR EXISTING BUILDINGS/City Responsibilities

OBJECTIVE 1: The City will provide information to the public in a variety of ways regarding energy efficiency and conservation.

ACTION STEP 1.1: Staff will advertise the City's energy audit program for commercial, residential, governmental, and education buildings, with education about existing incentives or rebates to encourage participation.

OBJECTIVE 2: Staff will provide information to citizens in an effort to encourage better weatherization in existing buildings in the City.

ACTION STEP 2.1: Staff will continue to make low- or no-cost energy audits available to City residents that emphasize importance of caulking to reduce air transfer, insulating crawl spaces and attics, upgrading windows, installing insulating window shades, et cetera.

ACTION STEP 2.2: The city will continue to advertise the availability of weatherization grants through the Governor's Energy Office.

OBJECTIVE 3: Staff and Gunnison Energy Action Working Group will work in complementing ways to reduce electricity use in existing buildings.

ACTION STEP 3.1: Staff will work with local energy-product retailers to further existing programs to convert commercial, residential, governmental and education buildings to low wattage lighting.

ACTION STEP 3.2: Staff will generate and circulate information about the advantages of motion-sensor light switches, power strips to eliminate standby loads, ditch-pump timers, and other energy-saving electric devices.

ACTION STEP 3.3: Staff will explore the feasibility of installing Energy Star computer sleep software on all City computers.

ACTION STEP 3.4: Staff will continue to promote and expand the Wind Energy Attributes Program to reduce the carbon emissions for electricity used.

OBJECTIVE 4: The City will provide information in an effort to reduce energy used for water heating...

ACTION STEP 4.1: Staff will request city employees who perform energy audits to include the visual evaluation of water heater and boiler insulation and maintenance in their audits.

ACTION STEP 4.2: The City will encourage the use of low-flow shower and faucet attachments in homes, businesses and educational buildings and provide potential savings information.

OBJECTIVE 5: The City will explore ways to reduce building energy use related to space heating and cooling.

ACTION STEP 5.1: Staff will explore incentives for business start-ups addressing heating efficiency, biomass use, and other alternative-energy heating systems in commercial, residential, governmental and education buildings.

ACTION STEP 5.2: Staff will explore mechanisms to encourage energy efficient home sale upgrades.

ACTION STEP 5.3: Staff will explore the possibility of initiating a "Green Home" and "Green Business" program to highlight homes and businesses that have made significant energy efficiency improvements.

ACTION STEP 5.4: Staff will explore adoption of the 2009 International Energy Conservation building code.

OBJECTIVE 6: The City will work to provide information regarding the reduction of energy use in rental properties.

ACTION STEP 6.1: The City will explore the possibility of legislating minimum energy efficiency standards for rental properties.

OBJECTIVE 7: The City will encourage major energy users within the City to develop their own Energy Action Plans.

ACTION STEP 7.1: The City will coordinate with Western State College, upon request, in its efforts to meet the College and University Presidents Challenge.

ACTION STEP 7.2: The City will coordinate with the Gunnison County government, upon request, in its efforts to reduce its energy consumption.

ACTION STEP 7.3: The City will assist RE1-J School District in developing and executing an Energy Action Plan upon request.

ACTION STEP 7.4: The City will identify major energy consumers in the private sector who might benefit from extra attention and assistance in setting and achieving energy use reduction targets and offer the City's assistance.

C-2. EFFICIENCY AND CONSERVATION OBJECTIVES FOR EXISTING BUILDINGS/Committee Responsibility

OBJECTIVE 1: The valley-wide Public Information and "Education in Schools" Committees will develop a saturation-scale public information/education program on opportunities for home and business energy efficiency and conservation. The three Action Steps for this Objective should precede all of the Action Steps for Objectives 2-7 below, so citizens will not feel they are being asked to do anything they do not understand the need for.

ACTION STEP 1.1: The Committee will prepare educational materials about efficiency and conservation for broad distribution in the City, "homework" for school students, door-to-door contacts, et cetera.

ACTION STEP 1.2: The Committee will collaborate with Western State College, Governor's Energy Office and Contractor Associations to develop classes or workshops for local contractors, realtors and developers to keep them up to speed on new building codes, efficiency systems (e.g., Energy Star), et cetera.

OBJECTIVE 2: The City Staff and Gunnison Energy Action Working Group will work in complementing ways to better weatherize existing buildings in the City. Specific responsibility for Action Steps is indicated in each step.

ACTION STEP 2.1: The valley-wide Fundraising and Grant writing groups will pursue grant or loan programs through the Governor's Energy Office, U.S. Department of Energy stimulus activities, and other resources in order to enable City residents to adequately weatherize their homes.

OBJECTIVE 3: The Gunnison Energy Action Working Group will work in complementing ways to reduce electricity use in existing buildings.

ACTION STEP 3.1: The Public Information Committee will collaborate with local energy-product businesses to educate citizens on Energy Star and other energy-efficient appliances and other major home or business electrical/electronic items.

ACTION STEP 3.2: The Finance Committee will work with local energy-product businesses to explore and publicize potential rebates, quantity discounts, tax breaks and other incentives to purchase Energy Star and other energy-efficient appliances and other home or business electrical/electronic items.

OBJECTIVE 4: The Gunnison Energy Action Working Group will work in complementing ways to reduce energy used for water heating.

ACTION STEP 4.1: The Public Information Committee will prepare and broadly distribute information about insulation and maintenance of water heaters through counter brochures, school programs, et cetera.

ACTION STEP 4.2: The Public Information and Finance Committees will collaborate with local energy-product businesses on education about, and rebates or other incentives for purchases of, Energy Star and other energy-efficient water heaters.

ACTION STEP 4.3: The Public Information and Finance Committees will collaborate with local energy-product businesses on education about, and rebates or other incentives for purchases of, Solar Thermal hot water systems.

OBJECTIVE 5: The Gunnison Energy Action Working Group will work in complementing ways to reduce building energy use related to space heating and cooling. Specific responsibilities for Action Steps are indicated.

ACTION STEP 5.1: The Public Information Committee will work with local energy-product businesses to coordinate workshops for improving insulation, air-leak caulking and other heating efficiency procedures in commercial, residential, governmental and education buildings.

ACTION STEP 5.2: The Public Information and Finance Committees will work with local energy-product businesses to prepare and provide information on energy-efficient windows and thermal window blinds, and on grants or rebates for low-income homes or businesses needing upgrades.

OBJECTIVE 6: The Gunnison Energy Action Working Group will work in complementing ways to reduce building energy use in rental properties in the City, for all categories covered in Objectives 2, 3, 4 & 5.

ACTION STEP 6.1: The Finance Committee will explore financing strategies to help landlords make improvements affordably.

ACTION STEP 6.2: The Public Information Committee will collaborate with City Staff to offer additional advisory assistance for tenants (in addition to “Renters’ Rights” booklet), and the City Council and Staff will work with the Grant-writing and Finance Committees, as resources and time allow, to explore potential incentives and/or rebates to landlords and/or tenants for energy-saving improvements they make.

OBJECTIVE 7: The City will encourage major energy users within the City to develop their own Energy Action Plans.

ACTION STEP 7.1: Relevant Working Group committees will coordinate with Western State College in its efforts to meet the College and University Presidents Challenge.

ACTION STEP 7.2: Relevant Working Group committees will coordinate with the Gunnison County government in its efforts to reduce its energy consumption.



D-1. NEW CONSTRUCTION AND DEVELOPMENT OBJECTIVES/City Responsibilities

OBJECTIVE 1: The City will encourage those involved in new construction to consider the approach of “near-zero” net GHG emissions.

ACTION STEP 1.1: The City will explore voluntary incentives and grant opportunities to encourage new buildings with near-zero net GHG emissions.

OBJECTIVE 2: The City will strive to maximize solar opportunities for all new construction and planned unit developments.

ACTION STEP 2.1: The City will consider modifying zoning and land use regulations to encourage the siting of buildings on all vacant City lots for maximum solar potential.

ACTION STEP 2.3: The City will consider phasing in new regulations (or enforcing existing regulations) for east-west lot orientations, streets extending or replicating City grid and street widths, and other energy-related advantages of the City’s plan for all new planned unit developments, where feasible, to maximize solar potential.

OBJECTIVE 3: The City, in accord with the existing Master Plan, will explore measures to reduce sprawl, such as mixed-use density (consistent with solar access) and proximity of new development to existing development, in order to minimize transportation needs, to maximize opportunities for combined heat and power systems (CHP), and to facilitate other energy-saving benefits of moderate density.

ACTION STEP 3.2: The City will explore incentives and grant opportunities for moderate- and high-density mixed-use developments (consistent with solar access).

ACTION STEP 3.3: The City will explore incentives and grant opportunities for implementing CHP systems.

D-2. NEW CONSTRUCTION AND DEVELOPMENT OBJECTIVES/Committee Responsibilities

OBJECTIVE 1: The Gunnison Energy Action Working Group will work in complementing ways to encourage those involved in new construction to approach “near-zero” net GHG emissions.

ACTION STEP 1.1: The Public Information Committee, the Office for Resource Efficiency and other relevant organizations will initiate, coordinate, or facilitate classes for contractors in state-of-the-art 21st-century construction technology and techniques for energy-efficient structures using renewable energy resources.

ACTION STEP 1.2: The Public Information Committee will develop materials for distribution through realtors, city building inspector, et cetera to inform citizens and newcomers of the advantages of upfront incorporation of energy efficiency and renewable energy resources in planning new construction.

OBJECTIVE 2: Relevant community committees will strive to maximize solar opportunities for all new construction and planned unit developments.

ACTION STEP 2.1: The Public Information Committee will collaborate with the City to create materials for distribution through realtors, city building inspector, et cetera to inform citizens and newcomers of the need to take solar potential into account in planning new construction.

ACTION STEP 2.2: The Finance, Grants and Public Information Committees will develop information packets encouraging those engaged in new construction or remodels to incorporate solar elements such as passive solar, solar hot water, and photovoltaic.

OBJECTIVE 3: The Gunnison Energy Action Working Group will work in complementing ways, in accord with the existing Master Plan, to explore measures to reduce sprawl, such as mixed-use density (consistent with solar access) and proximity of new development to existing development, in order to minimize transportation needs, to maximize opportunities for combined heat and power systems (CHP), and to facilitate other energy-saving benefits of moderate density.

ACTION STEP 3.1: The Public Information Committee will collaborate with the four jurisdictions to initiate or facilitate classes for contractors in state-of-the-art 21st-century construction technology and techniques for energy-efficient structures using renewable energy resources and CHP systems.

E-1. TRANSPORTATION OBJECTIVES/City Responsibilities

OBJECTIVE 1: The City will work with the Gunnison Energy Action Working Group in complementing ways to collaborate with the County government, the Rural Transportation Authority and Energy Action Working Groups from the up valley jurisdictions, to reduce Gunnison-initiated commuter traffic on Highway 135.

ACTION STEP 1.1: The City will collaborate with the RTA to explore ways to publish and distribute the bus schedule more extensively and intensively.

ACTION STEP 1.2: The City will collaborate with the RTA to explore the possibility of developing “Park-n-Ride” lots with covered shelters for locking up bicycles.

ACTION STEP 1.3: The City and the Grants Committee will support RTA efforts to increase number of bus trips on Hwy. 135.

ACTION STEP 1.4: The City will explore the possibility of expanding its website to enable regular commuters to find rides with people who have to drive (contractors, construction workers with toolboxes, et cetera).

OBJECTIVE 2: The City will explore opportunities for reducing use of private automobiles within the City.

ACTION STEP 2.1: The City Council and Staff will continue to investigate and consider implementing street improvements to make the streets more convenient and safe for pedestrians and bicyclists.

ACTION STEP 2.2: The City Staff will research funding for a circulator bus to move people around the city.

E-2. TRANSPORTATION OBJECTIVES/Committee Responsibilities

OBJECTIVE 1: The Gunnison Energy Action Working Group will work in complementing ways to collaborate with the County government, the Rural Transportation Authority and Energy Action Working Groups from the up valley jurisdictions, to reduce Gunnison-initiated commuter traffic on Highway 135.

ACTION STEP 1.1: Energy Action members from all four jurisdictions will explore the possibility of expanding jurisdiction websites and the radio “Ride Board” to enable regular commuters to find rides with people who have to drive (contractors, construction workers with toolboxes, et cetera).

OBJECTIVE 2: Create incentives for reducing use of private automobiles, especially within the City.

ACTION STEP 2.1: The Public Information Committee will create and distribute flyers and reminders to “bundle” chores requiring car use, resetting the “internal timer” to leave 5-10 minutes earlier to permit walking, et cetera.

ACTION STEP 2.2: The Gunnison Energy Action Working Group will explore the possibility of a bike-borrowing system and its maintenance.

ACTION STEP 2.3: The Gunnison Energy Action Working Group will explore the possibility of a “Ride-on-Call” system (like “Safe-Ride”).



F-1. LANDFILL WASTE OBJECTIVES/City Responsibilities

OBJECTIVE 1: Convert household waste stream to recycling and composting stream by 2020, reducing methane and carbon dioxide emissions.

ACTION STEP 1.2: The City will develop a tiered “pay as you throw” fee for waste hauling to promote more recycling.

OBJECTIVE 2: The City Staff will work with the other valley jurisdictions and local contractors to encourage the recycling of construction materials in new construction and remodels.

ACTION STEP 2.1: The City will create a place at the tree dump for waste construction wood, to be “recycled” as firewood.

F-2. LANDFILL WASTE OBJECTIVES/Committee Responsibilities

OBJECTIVE 1: Convert household waste stream to recycling and composting stream by 2020, reducing methane and carbon dioxide emissions.

ACTION STEP 1.1: The Public Information Committee and Office for Resource Efficiency will continue to collaborate with the City to create and distribute the Recycling Guide.

ACTION STEP 1.2: The Public Information Committee will create, and collaborate with the City to distribute, a composting guide, and will initiate composting workshops.

ACTION STEP 1.3: The Public Information Committee will work with local energy-products businesses to market backyard compost bins.

OBJECTIVE 2: The Committee will work with the other valley jurisdictions and local contractors to encourage the recycling of construction materials in new construction and remodels.

ACTION STEP 2.1: A Recycling Committee from all four jurisdictions will work with local contractors to develop, publicize and utilize a regional network of suppliers of recycled materials.

ACTION STEP 2.2: A Recycling Committee from all four jurisdictions will work with local contractors to explore potential for a local recycled materials center in the valley.



G. LONGER-TERM “2050” OBJECTIVES (Objectives that should be underway, but not fully executed, by 2020)

OBJECTIVE 1: Inventory renewable energy resources in the valley.

ACTION STEP 1.1: The committee will develop working relationships with Western State College faculty in Natural and Environmental Sciences department, to have classes and interns work on background research for this inventory.

ACTION STEP 1.2: The committee will work with Forest Service, BLM, City and County officials to consider the possibility of inventorying biomass resource in the valley.

ACTION STEP 1.3: The committee will contact the Colorado Geological Survey and US Geological Survey about geothermal opportunities that might exist in the valley near Gunnison.

ACTION STEP 1.4: The committee will explore the possibility of Inventorying possible sites near Gunnison for concentrated solar thermal power generation.

ACTION STEP 1.5: The committee will collaborate with Business Administration programs at WSC to develop workshops and possibly coursework in small-business economic development based in renewable energy production and energy efficiency.

OBJECTIVE 2: The City will explore the possibility of participating in an inventory of local non-renewable energy resources that might fuel “micro power” local generation that may be more efficient than long-transmission of coal-fired power.

ACTION STEP 2.1: The City will work with the other valley jurisdictions, federal agencies, WSC, MEAN and GCEA to discuss the feasibility of inventorying the valley’s coal bed methane potential.

ACTION STEP 2.2: The City will explore the possibility of working with other valley jurisdictions to explore potential for power generation from landfill methane.

ACTION STEP 2.3: The City will explore the possibility of working with other valley jurisdictions, MEAN and GCEA to explore the potential for thorium power generation.

OBJECTIVE 3: The Committee will work with the CSU Extension and local gardeners to develop local food production (the most basic energy resource for people who will be walking and bicycling more).

ACTION STEP 3.1: The Public Information Committee will collaborate with the CSU Extension Master Gardener Program to organize workshops for gardeners on food plants that work in this zone, composting, et cetera.

ACTION STEP 3.2: The Committee will work with the CSU Extension, the Small Business Development Center, local gardeners, and the Gunnison County Stock growers to explore a “high-altitude irrigated agricultural experimental farm” on the City’s Van Tuyl land that will perhaps provide ideas for new cash crops for local ranchers as well as local gardeners.

ACTION STEP 3.3: The committee will work with WSC Business Administration program and Colorado Small Business Development Center to create a marketing plan for more local access to local food (e.g., getting local beef in restaurants and the supermarkets, developing “middleman” businesses for food retailing, “growing” the Farmers’ Market, et cetera).



H. FINANCING

1. GHG REDUCTION ACTIONS

Nearly all of the GHG reduction actions presented in this plan cost money, and funding them presents perhaps the greatest challenge in achieving our goals and objectives. Several options exist and combinations of these options may be adopted according to availability, need, and appropriateness:

- **Owner funding:** Owner covers project costs from his/her own resources.
This is the simplest option; however, it is often the least attractive for expensive projects (e.g. retrofits) since few property owners in Gunnison (private, commercial, or governmental) possess sufficient ready cash - they must therefore borrow to pay for these projects and thereby incur significant interest and financing charges. The lengthy payback time for some projects and uncertainty about owners' financial futures rightly make owner funding a hard sell.
- **Low- or no-interest Loans:** Owner borrows money from a governmental or private entity (for-profit or not-for-profit) at rates below prevailing interest rates for similar loans. If the cost of an energy-saving/GHG-reducing project can be spread over many years, and if the interest and financing charges are low enough, the owner can participate with less risk to his/her financial future. At a time when finding lenders willing to make loans, much less low- or no-interest loans, is difficult, this option may not be viable. However, funding pools for community-scale projects (e.g., energy audits, retrofits) might be obtained by issuing City-backed bonds, and governmental agencies at the state or federal level may underwrite such pools as part of a new economic stimulus package.
- **Grants, rebates and incentives:** Some or all of project costs are covered by outright grants from various entities (governments, non-profits, other private parties). This is obviously an attractive option from the owner's standpoint and it is already being successfully employed in the Gunnison Valley (examples include giving away free CFLs and partial rebates on the costs of weatherizing homes [City of Gunnison, GCEA]). Low-cost projects such as rebates for energy-efficient appliances are easier to arrange than expensive ones (e.g., rebates for installing solar hot water systems); however, numerous states have found that incentives (e.g., net metering) can stimulate strong owner interest.
- **Performance contracting:** Owners contracts with a private firm or special-purpose governmental agency that provides the desired goods, services (and perhaps maintenance). The owner is guaranteed a specified price for his/her energy consumption over a fixed term. The performance contractor garners funds from the difference between the owner's payments and the (reduced) cost of the energy consumed the by owner.
[A number of performance contracting companies are already doing business in larger U.S. cities (e.g., Borrego Energy in San Francisco); exploring the valley-wide profit potential for one of these firms is worth the effort. At the same time, Gunnison should study the possibility of becoming a performance contractor for its residents. Since the expected profit from such a venture would be less than for a private contractor, costs to residents could be correspondingly less (there are, of course, serious questions to be resolved regarding capitalization, competition with the private sector, and the size of city government - these need careful discussion before going ahead).]

2. EDUCATION ACTIONS

Materials for the public information and education process necessary to create an intensive and extensive energy efficiency and conservation program, in the City of Gunnison as well as throughout the valley, will be other major expenditure for this Plan. Similar problems exist among the four jurisdictions and the economy of scale dictates that these materials be prepared through a multi-jurisdictional funding process. These possibilities exist:

- **Local Government Funding:** Given the current state of the economy and local tax revenues, local government capability for funding will be very limited, except for such educational materials or publications as are already in the budget, and might be modified or supplemented to help the energy action effort.
- **Outside Grants:** Some funds are available, or may become available, through state and federal programs, and the Multi-jurisdictional Fundraising and Grant-writing Committees will be pursuing these funds. The valley's contact with the Governor's Energy Office indicated that collaborative multi-community approaches will be favored for federal stimulus funds.
- **Local Fundraising:** The Multi-jurisdictional Fundraising Committee will collaborate with other public and private entities in the valley to create events for raising funds for educational materials and workshops and other program costs – and to help publicize the energy action programs while having a good time.



I. ELECTRIC POWER SUPPLY

CITY OF GUNNISON, COLORADO ELECTRIC UTILITY ENERGY ACTION PLAN

The City of Gunnison Electric Utility is committed to the goal of reducing CO₂ emissions emitted by electric generation sources by 20% below 2005 levels by the year 2020 to the best of its ability while acting in a fiscally responsible manner.

The combined total of CO₂ emissions attributed to electric generation resources provided to the City in 2005 was approximately 40,000 tons. The City does not own or operate any generation resources. In order to meet the goal of a 20% reduction the city will need to reduce CO₂ emissions to 32,000 tons by 2020. This is an 8,000 ton reduction in CO₂ emissions over the next twelve years. Given the fact that electric energy use has increased in the City by approximately 3% per year since 2005 it will be challenging to meet the goal.

Listed below are ways the City Electric Department proposes to work toward achieving the reduction goal. Many of the listed actions have been in place for a number of years. While some strategies were implemented in 2009, others are being considered for future implementation. Effective and affordable new technology must be considered as it becomes available.

- The city offers its electric customers the opportunity to purchase 100kWh blocks of wind energy attributes. Our customers currently voluntarily purchase 460,880 kWh of attributes per year at a cost of \$7,835 per year which reduces CO₂ emissions by approximately 461 tons per year for a 1.15% reduction in CO₂ emissions based upon 2005 data. The city will continue to advertise and provide wind energy attributes on a voluntary basis.
- The City purchases 1,000,000 kWh of wind energy attributes per year at a cost of \$17,000 per year which reduces CO₂ emission by 1,000 tons and is a 2.5% reduction based upon 2005 data.
- Beginning in 2009 the City contracted through the Municipal Energy Agency of Nebraska (MEAN) for 5,986,098 kWh of deliverable wind generated power at a cost of \$108,000 per year for an approximate 5,986 ton reduction of CO₂ emissions below 2005 levels. This represents a 14.96% reduction below 2005 levels. MEAN continues to expand its portfolio of wind generation which will be offered to its membership and or included in the MEAN generation portfolio. The City will continue to explore the possibility of contracting for additional wind power with consideration of operational issues, as well as, the financial impact to customers.
- The City has been working toward reducing distribution line losses for many years. The City currently reports approximately 5.4% losses per year. This is considerably lower than the industry standard which is in the 6% range. There is little room for improvement as line losses are an inherent part of electric distribution although the city will continue to work toward further reductions of these losses.
- For the past sixteen years the city in conjunction with MEAN has offered tier-one energy audits with infrared camera observations free of additional charges to City electric customers. The City plans to continue this service and expand the program to the extent possible.
- The City has in the past given electric customers approximately 2,000 compact fluorescent lights at no additional charge. Replacing one hundred 100 watt bulbs with compact florescent bulbs can reduce 46 tons CO₂ over the life of the bulb. 2,000 bulbs have the potential of reducing CO₂ emissions by 92,000 tons over the life of the bulbs. The City plans to continue with this effort to the extent possible while working within budget constraints. In addition the City is exploring other energy efficient improvement programs such as motion sensor light switches and programmable thermostats.
- Beginning in April of 2009 the City and MEAN implemented a commercial lighting rebate program in order to assist business owners and governmental buildings in retrofitting to more efficient lighting.
- The City began working with the Governors Energy Office in 2008 to offer customers financial assistance in weatherization improvements.
- The City is currently reviewing the 2009 International Energy Conservation Code which states that there is a potential for 15% reductions in energy use and will consider adoption of the code with consideration of specific areas as they relate to the City of Gunnison. In the future the City will review the most current codes for

consideration and possible adoption.

- The City offers a net metering program to customers who choose to install a photovoltaic system or wind generation with size limitations. The current policy is limited to 50 customers due to the fact the current net metering policy pays the customer for any electricity wheeled to the city grid at the current retail electric rate.
- In 2009 the City will install a solar system to pre heat water at the newly constructed City Aquatics Center. This project is made possible by a grant in the amount of \$326,000 being awarded to the city by The Department of Local Affairs Energy Impact Assistance Fund along with matching funds from the city. The city also added other energy conservation measures such as additional insulation and energy efficient lighting in the Aquatics Center and the newly opened Events Center
- The City believes that energy conservation is an integral part of accomplishing the 20% reduction goal and will provide information and recommendations to City electric customers in order to seek voluntary cooperation in this effort.
- The City will continue to purchase hydro generation to the maximum level provided by the Western Area Power Administration (WAPA).

Based upon 2005 data the City of Gunnison renewable portfolio has reduced carbon emissions by 18.61% for a combined total reduction of 7,447 tons of CO₂ emissions. As stated above the growth factor will have to be considered as we continue to evaluate CO₂ emissions related to power generation.

